

REMARKS

This Amendment is in response to the Office Action of October 5, 2004. In the Office Action, the Examiner indicated that Claims 1-25 are pending, Claims 1, 11 and 21 are rejected, and Claims 2-10, 12-20 and 22 are objected to. With this Amendment, Claims 1, 11 and 21 are amended and Claims 1-25 are presented for reconsideration and allowance.

Claim rejections - 35 USC 103

The Examiner rejected Claims 1, 11, 21 under 35 USC 103(a) over Hunter US Patent 5,416,409.

With this Amendment, Claim 1 is amended to specify that the analog inputs are provided by an analog system and that the control circuit further provides a real time output that represents a useful parameter of the analog system. Similarly, method Claim 11 is amended to specify providing a plurality of analog inputs provided by an analog system, and providing a real time output that represents a useful parameter of the analog system. Claim 21 is also amended to specify a plurality of analog inputs provided by an analog system, and means for providing a real time output that represents a useful parameter of the analog system.

In Claims 1, 11 and 21, as presently amended, analog inputs are provided by an analog system, and an error output is provided along with a real time output that represents a useful parameter of an analog system.

The Hunter US Patent teaches an apparatus and method for testing circuit board interconnects in which boundary scan cells load data test bits onto output pins of integrated circuits, "forcing the output pins ... to assume preselected digital values" (Hunter, column 2, lines 27-29) and then boundary scanning is performed on analog inputs to test interconnections. With the output pins forced to preselected test values, the

output pins clearly cannot be at real time levels associated with normal operation of the circuit. The circuit taught in Hunter therefore does not allow for testing the circuit and also providing an output representing a useful parameter of the analog system in real time.

In the invention as presently claimed in Claims 1, 11, 21, however, an analog-to-digital converter receives a sequence of analog outputs provided by an analog system. In the present invention, outputs are not forced to preselected test values as taught in Hunter.

In the present invention, an error output is provided along with a real time output that represents a useful parameter of the analog system. In the present invention, the error output is provided without loss of the ability to provide a useful parameter output in real time.

As pointed out in the present disclosure at page 13, lines 12-15, "The problem of providing inaccurate data to a digital output is solved or improved by providing an error output that warns of stuck bits or shorted input pins.

Amended Claims 1, 11, 21 are thus believed to be patentable. Reconsideration and allowance of Amended Claims 1, 11, 21 is therefore requested.

Allowable Subject Matter

The Examiner indicated that Claims 2-10, 12-20 and 22-25 were objected to as being dependent on an unpatentable base claim. With this amendment, the base claims 1, 11 and 21 are amended and are believed to be presently patentable. Reconsideration of the objections and allowance of Claims 2-10, 12-20 and 22-25 is therefore requested.

Information Disclosure Statement

A supplemental information disclosure statement (IDS) is filed together with this Amendment.

The application appears to be in condition for allowance and favorable action is requested. The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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